

CLASSIFICATION

SECRET

SECRET

CENTRAL INTELLIGENCE AGENCY

REPORT

50X1-HUM

INFORMATION FROM

FOREIGN DOCUMENTS OR RADIO BROADCASTS

CD NO.

COUNTRY USSR

DATE OF
INFORMATION 1950

SUBJECT Economic - Ferrous and nonferrous metals

HOW
PUBLISHED Daily newspapers

DATE DIST. 12 Oct 1950

WHERE
PUBLISHED USSR

NO. OF PAGES 3

DATE
PUBLISHED 24 Jun - 29 Jul 1950SUPPLEMENT TO
REPORT NO.

LANGUAGE Russian

THIS DOCUMENT CONTAINS INFORMATION AFFECTING THE NATIONAL DEFENSE OF THE UNITED STATES WITHIN THE MEANING OF ESPIONAGE ACT 80 U. S. C. 31 AND 32, AS AMENDED. ITS TRANSMISSION OR THE REVELATION OF ITS CONTENTS IN ANY MANNER TO AN UNAUTHORIZED PERSON IS PROHIBITED BY LAW. REPRODUCTION OF THIS FORM IS PROHIBITED.

THIS IS UNEVALUATED INFORMATION

SOURCE Newspapers as indicated.

METALLURGISTS, MACHINE BUILDERS STRESS METAL SAVING

URGES IMPROVED ROLLING TECHNIQUES -- Pravda Ukrainy, 24 Jun 50

A. Chekmarev, Active Member, Academy of Sciences Ukrainian SSR, Doctor of Technical Sciences, and twice Laureate of the Stalin Prize, writes that the proposal of some engineers and plant workers to reduce by half the allowances permitted in rolling profiles is entirely possible, but first requires a number of technical and organizational steps. First of all, the necessary pace for all rolling operations must be established by means of an automatic regulator to control the time intervals throughout the entire process. The Dnepropetrovsk Metallurgical Institute has installed such a regulator in the seamless pipe shop of the Plant imeni Lenin, providing uniform operation of the mill, increasing labor productivity, and permitting the rolling of pipe according to the so-called minimum allowances. Similar pace regulators have been installed in the rolling mills of the Plant imeni Petrovskiy. Far from all rolling mills in southern enterprises, however, have yet been equipped with this type of regulator.

Special attention must also be given to the quality of the work of boring roller grooves. Operations with worn-out or oversize grooves, particularly in rolling such shaped profiles as rails, beams, girders, etc., causes loss of metal and failure to meet specifications. Precision rolling demands precision grooving, particularly of the finishing rolls. The groovers at a number of plants are not yet aware of the importance of quality in their work and thus a tremendous source of metal saving is not realized.

The rolling mill operators have every right to make serious complaints against the roller-casting plants because of unsatisfactory roller quality. These plants are not meeting the main requirement -- to increase the wear-resistance of the rollers. The durability of the rollers produced by the Nizhne-Dneprovskiy and Lutugino roller-making plants leaves much to be desired and is two or three times below requirements. The Dnepropetrovsk Metallurgical Institute has shown by scientific tests that the durability of rollers can be increased three or more times. In addition, it has been shown that it is possible to cast rollers with finished grooves, the refined surface of which would decrease wear by

- 1 -

SECRET

CLASSIFICATION

SECRET

STATE	<input checked="" type="checkbox"/> NAVY	<input checked="" type="checkbox"/> NSRB	DISTRIBUTION							
ARMY	<input checked="" type="checkbox"/> AIR	<input checked="" type="checkbox"/> FBI								

SECRET

SECRET

50X1-HUM

five times. The Nizhne-Dneprovskiy Plant has started casting these rollers and they have already been tested at the Dneprodzerzhinsk Metallurgical Plant imeni Dzerzhinskiy, the Nikopol' Pipe Plant, and other plants, with good results.

The third necessary factor is to provide uniformity in the heating of ingots and billets in soaking pits. Many rolling mills (at the Plant imeni Petrovskiy, Plant imeni Lenin, and others) have furnaces with insufficient capacity. The furnaces should be extended, the heating of the ingots forced by installation of additional burners, the insulation of the furnaces and the coefficient for their utilization improved, and fuel with a higher heat value used.

The level of modern technology makes it fully possible to introduce automatic control of the roller adjustment and thereby to ensure stricter limits in rolling than is possible with hand control. Tests have been made of a precision rolling installation on a light-section mill which showed the possibility of obtaining allowances on the plus side within 0.1 millimeter (over the theoretical size), which is one-third the present allowances for high precision. Even before the war, an apparatus for precision rolling and for rolling according to the minimum allowances had been invented. This apparatus, however, has not yet been put into production. Because of the existing system of payment according to the weight and not the meterage of rolled products, metallurgical workers have approached the entire matter without thought for the state's interests, and therefore have refused further expansion of precision rolling. The Ministry of the Metallurgical Industry has made no attempt to solve this important problem.

The existing system of payment for rolled metal products should be reviewed and an incentive for precision rolling and metal saving should be established for rolling mill workers.

PROPOSES NEW METAL-CONSUMPTION NORMS -- Leningradskaya Pravda, 28 Jul 50

The experience of leading enterprises shows that the main factor in saving metals is the introduction of new progressive norms for metal consumption into all phases of production. The significance of these progressive norms is extremely great. At the "Elektrik" Plant, introduction of new norms for metal consumption has made possible the saving of many tons of scarce nonferrous alloys. The progressive norms are becoming a source of output of additional production made from saved metals.

Machine builders should make more extensive use of the methods of the leaders in the competition among Leningrad and Moscow plants for savings and should provide for introduction of progressive norms in all plants. There is no doubt that as a result of this mass movement for economy, new and more progressive norms for consumption of basic and auxiliary materials will be introduced in the immediate future and will be based on the experience of the production leaders.

This economy competition could be furthered by a strengthening of the cooperation between science and industry. The extensive dissemination of the innovation proposed by L. V. Kantorovich, Doctor of Physicomathematical Sciences and Laureate of the Stalin Prize, is proof of this factor. Kantorovich, together with associates of the Mathematics Institute of the Academy of Sciences USSR, proposed to introduce into the Plant imeni Yegorov new scientific methods providing more efficient laying out of metals prior to cutting or stamping of parts. The introduction of these progressive methods has helped the plant to cut metal consumption as much as 500 kilograms for each railroad car.

Of major importance is the utilization of cuttings, particularly those of nonferrous metals and alloys. Any enterprise, by installing a vertical induction furnace, can remelt nonferrous cuttings into alloys and use them as substitutes for the primary metals. However, machine builders have not yet given sufficient attention to utilization of production wastes. The coefficient for utilization of waste, for example, is 0.2 for the weight of a part at the weight of the waste.

SECRET

SECRET

SECRET

SECRET

50X1-HUM

metal, that is, the relation of the net weight of a part to the weight of the required metal, still lies within the limits of 0.5-0.6. To decrease wastes and to make fuller use of them is the pressing problem at present.

The possibilities for effecting savings by cutting down the intermediate stages of machine building and improving technology are not being used fully by machine builders. For example, the progressive method of casting under high gas pressure which makes it possible to decrease the so-called deadhead in castings, is not being used extensively. For each ton of metal, up to 300-400 kilograms of molten steel could be saved this way. The same condition exists also in the introduction of powder metallurgy.

Machine designers must also play an important part in the campaign for metal savings. At the Plant imeni Stalin, a group of designers worked out a plan for a new heavy-duty hydroturbine which decreased the height of the machine and thereby saved 100 tons of metal in its production. Far from all potentialities of this field are being used.

Another means of metal saving is possible through efforts to introduce new progressive methods of producing protective surfaces for machines -- porous chrome plating, anode oxide coating, rustproofing of steel, etc.

New and increased demands are being made on the organization of the accounting of metal consumption. New documentation providing strict standardization of metals and making possible rapid and precise changes in the norms and assortment of materials in shops and sectors is being introduced. Strict limits on metal consumption are being established for shops and brigades as a result of the new progressive norms. -- V. Petrov, Candidate in Technical Sciences

OMEGA PLANT SAVES BRONZE -- Leninskoye Znamya, 29 Jul 50

The Omega Machine-Building Plant has developed the technology for production of bimetallic (steel and bronze) parts to replace production of pure bronze parts. Plant engineers studied the experience in production of bimetallic parts of other plants, particularly the Moscow Automobile Plant imeni Stalin. For each housing on a hoist, 10 kilograms of bronze are saved with the new method and 3 kilograms of bronze in the production of each bushing. In the production of bimetallic parts bronze cuttings are used exclusively, which in itself represents a considerable saving, since these cuttings were once considered waste products.

- E N D -

- 3 -

SECRET

SECRET